Minneapolis Water Works
Monthly Plant Effluent Water Analysis for:
December 2020

Physical and Chemical Water Quality

	Plant Effluent Average Value
Temperature, River Water Average (°C)	2.8
Total Organic Carbon (ppm* as C)	3.31
Total Dissolved Solids (ppm)	152
Turbidity (NTU)	0.03
Alkalinity-Total (ppm as $CaCO_3$)	49
Ammonia Nitrogen (ppm as N)	0.91
Total Chloramine Residual (ppm as NH2Cl)	4.0
Fluoride-F (ppm as F)	0.68
pH	9.05
Nitrate - NO_3 (ppm as N)	0.99
Nitrite - NO_2 (ppm as N)	<0.015
Phosphate-PO_4 (ppm as PO_4)	0.91
Sulfate - SO_4 (ppm as SO_4)	25.7
Total Hardness (grains per gallon) EDTA method	5.15
Total Hardness (ppm as $CaCO_3$) EDTA method	88

Chemical Water Quality - Inorganic Metals

Chemical Element	**Plant Effluent Average Value**
Aluminum-Al (ppm as Al)	0.03
Arsenic-As (ppm as As)	Not Detected
Cadmium-Cd (ppm as Cd)	Not Detected
Calcium-Ca (ppm as Ca)	30.8
Chloride-Cl (ppm as Cl)	29.5
Chromium (ppm as Cr)	<0.01
Copper-Cu (ppm as Cu)	<0.01
Iron-Fe (ppm as Fe)	Not Detected
Lead-Pb (ppm as Pb)	Not Detected
Magnesium-Mg (ppm as Mg)	3.6
Manganese-Mn (ppm as Mn)	<0.01
Sillca-Si (ppm as Si)	9.5
Sodium-Na (ppm as Na)	15.9
Zinc-Zn (ppm as Zn)	<0.01

*ppm = parts per million